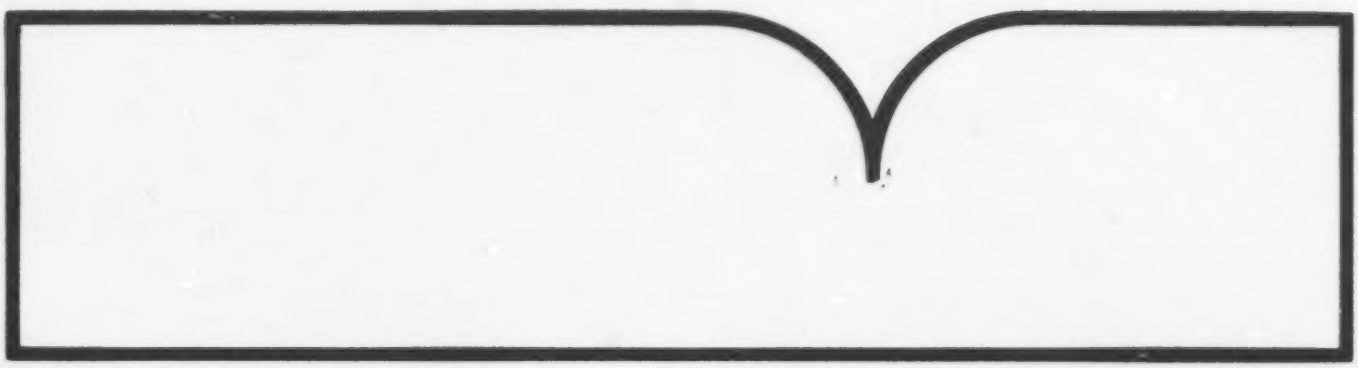
PB89-229579

Superfund Record of Decision (EPA Region 4) American Creosote Works, TN (First Remedial Action), December 1988

(U.S.) Environmental Protection Agency, Washington, DC

5 Jan 89



U.S. Department of Commerce
National Technical Information Service
NTIS

United States
Environmental Protection
Agency

Office of
Emergency and
Remedial Response

EPA/ROD/R04-89/043
December 1988

PB89-229579

EPA

Superfund Record of Decision:

American Creosote Works, TN

REPRODUCED BY
U.S. DEPARTMENT OF COMMERCE
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15. Supplementary Notes

16. Abstract (Limit: 200 words)

The American Creosote Works (ACW) site is located immediately southwest of Jackson, in central Madison County, Tennessee. The 60-acre site is in a partially developed area, and is bounded on the southwest by the South Fork of the Forked Deer River, on the west and north by Central Creek (a tributary to the South Fork of the Forked Deer River), on the east by a lumber mill, and on the south by the Seaboard Railroad. ACW conducted wood preserving operations using both creosote and PCP from the early 1930s until December 1981. Wastewater sludges from the treatment processes are listed as RCRA K001 waste. Untreated process wastewater and potentially contaminated stormwater runoff were discharged directly into Central Creek until 1973, at which time a levee was constructed to retain surface water runoff. The soil borrow pits used for the levee construction became sludge storage lagoons. A wastewater treatment system was installed onsite during 1974 and 1975, and operated until 1981. Reportedly, a "few" loads of filter sludge from the treatment system were spread on the back road on the east end of the property, and a recirculation pond overflowed more than once. In March 1983 five unlined lagoons containing creosote and PCP sludge and water overflowed, prompting the first of two EPA removal actions. In May 1933 the first removal consisted of pumping and treating approximately 30 million gallons of water, placing
(See Attached Sheet)

17. Document Analysis a. Descriptors

Record of Decision - American Creosote Works, TN
First Remedial Action
Contaminated Media: sludge, debris
Key Contaminants: VOCs, organics (PAHs, phenols)

b. Identifiers/Open-Ended Terms

c. COSATI Field/Group

18. Availability Statement	19. Security Class (This Report) None	21. No. of Pages 38
	20. Security Class (This Page) None	22. Price

EPA/ROD/R04-89/043
American Creosote Works, TN
First Remedial Action

16. Abstract (Continued)

the remaining untreated oil/water mixture in empty tanks onsite, stabilizing the contaminated soil and sludges remaining in the lagoon material, and covering two lagoons with a clay cap. A second removal action was conducted in March 1986 after several storage tanks were determined to be leaking. The plant process facilities, including the treatment building, storage tanks, piping, ponds, and filters, are considered a point source of contaminants due to leakage from these structures and adjacent pits. Furthermore, several tanks and pipes are structurally unsound and open to precipitation, posing a threat of overflow or sudden, major release of contaminants. This remedial action will focus on reducing surface contamination resulting from degradation of the tanks and site structures, and minimize the potential for increased contamination due to flooding while further information is developed and analyzed. A subsequent remedial action will address contaminated soil, gound water, and surface streams. The primary contaminants of concern affecting the sludges, site structures, debris, and tanked liquids are VOCs and other organics including PAHs and phenols.

The selected remedial action for this site includes consolidation and incineration of sludges in the vicinity of the buildings and tanks; on- or offsite incineration of the oils and sludges from the tanks; treatment of tanked process liquids onsite using a sand filter, filter press, and carbon adsorption unit, followed by discharge to a surface stream; decontamination and offsite disposal of site structures (e.g., buildings, tanks, pipes) in RCRA Subtitle D facility; construction of a flood-protection dike; deed restrictions and site fencing; and site stabilization including monitoring onsite water levels behind the dikes and pumping, treating (as needed), and discharging impounded water pending a final remedy. The estimated present worth cost for this remedial action ranges from $5 million to $6 million. Annual O&M costs were not provided.

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

345 COURTLAND STREET
ATLANTA, GEORGIA 30365

MEMORANDUM

DATE: DEC 21 1988

SUBJECT: Declaration for the American Creosote Works, Tennessee
Record of Decision

FROM: Jon D. Johnston, Chief
NC/SC Site Management Unit

THROUGH: Richard D. Green, Chief
North Site Management Section

Richard D. Stonebraker, Chief
Superfund Branch

Patrick M. Tobin, Director
for Waste Management Division

TO: Greer C. Tidwell
Regional Administrator

This decision document presents Operable Unit One of the selected remedial action for the American Creosote Works, Inc. site in Jackson, Tennessee, developed in accordance with CERCLA, as amended by SARA, and, to the extent practicable, the National Contingency Plan. This decision is based on the administrative record for this site. The attached index identifies the items that comprise the administrative record upon which the selection is based.

The State of Tennessee has concurred in the selected remedy.

The remedial investigation (RI) identified general areas of contamination but was not of sufficient scope to thoroughly define the extent of contamination in soil, groundwater or surface water. The RI identified the general site hydrogeologic conditions and areas of high contamination including process liquids and sludges, and near-surface soils. Due to the high levels and limited information about the extent of contamination as well as the difficult hydrogeology, a final remedy cannot be selected at this time. Operable Unit One was developed to implement early action items that are consistent with any final remedy and to address the principal threats posed by the site. These actions include:

* deed restrictions limiting further use of the site
* construction of flood protection dike around the site and site stabilization
* removal and disposal of tanked liquids and sludges
* removal and disposal site structures
* installation of security fencing around the site

1-C

This operable unit includes: treatment of the water contained in the tanks; incineration of the oils and sludges from the tanks; decontamination, demolition and disposal of the tanks; and, consolidation and incineration of sludges (spilled or leaked) in the immediate vicinity of the buildings and tanks. Water from the tanks will be treated on-site utilizing a sand filter, filter press and carbon adsorption unit. Treated water will be analyzed to document treatment efficiency and discharged to the South Fork Forked Deer River or Central Creek. The oil and sludges from the site will be incinerated off-site at a fixed facility or on-site in a mobile incinerator if an off-site facility is unable to dispose of the waste. The site structures (buildings, tanks, pipes) will be decontaminated and disposed off-site at a Subtitle D facility to be selected in consultation with the Tennessee Department of Health and Environment. Uncontaminated or decontaminated salvageable materials will be sold if possible to a scrap dealer or recycler. Site stabilization pending a final remedy will include monitoring water levels on-site behind the dikes and pumping, treatment (as needed) and discharge of impounded water. Implementation of this operable unit will remove tanked sludges, process liquids and process buildings which are major potential contamination sources. Fencing all or part of the site will prevent accidental exposure to the near surface contamination and limit the threat of dermal contact and ingestion. This operable unit will prevent future adverse environmental effects that may occur as a result of potential releases from the tanks but does not address environmental threats from existing contamination of surface streams. Additionally, this alternative does not address continued contaminant migration via the groundwater.

The selected remedy is protective of human health and the environment, attains Federal and State requirements that are applicable or relevant and appropriate for this remedial action, and is cost-effective. By authorizing the thermal destruction of liquids and sludges, this remedy satisfies the statutory preferences for remedies that employ treatment that reduces toxicity, mobility, or volume as a principle element and utilizes permanent solutions and alternative treatment (or resource recovery) technologies to the maximum extent practicable. Because this is an operable unit of final remedial action, the five-year facility review is not applicable.

Greer C. Tidwell — 1-5-89

Greer C. Tidwell, Regional Administrator — DATE

Decision Summary
American Creosote Works Site, Tennessee
Operable Unit One

I. Site Name, Location and Description

The American Creosote Works (ACW) site is located in central Madison County, Tennessee, on the Jackson South 7-1/2 minute quadrangle. The site covers approximately 60 acres southwest of downtown Jackson, Tennessee (Figure 1.1). The site is bounded on the south by the Seaboard Railroad, on the southwest by the South Fork Forked Deer River, on the west and north by Central Creek, a tributary to the South Fork Forked Deer River, and on the east by a lumber mill. The general area is characterized by a gently rolling topography with wide, marshy flood plains. Maximum relief is on the order of 100 feet (elev 350 ± ft MSL to elev 450 ± ft MSL), with relief on the plant site of about 20 feet. The surface topography of the site includes numerous small swales, four lagoons and other low lying areas. This low lying areas accumulate contaminated surface water and sediments.

II. A. Site History

The American Creosote Works, Inc., began operation as a wood preserving facility in the early 1930's and continued until December 1981. The wood preserving operation used both creosote and pentachlorophenol (PCP). Wastewater sludges from the creosote and PCP treatment of wood products are listed as K001 waste under RCRA.

Untreated process wastewater and potentially contaminated storm water run-off were discharged directly into Central Creek until 1973. The major sources of contaminated water were the treatment cylinder condensate and surface water run-off over contaminated soils.

A levee was constructed in 1973 to retain surface water run-off from the site and to reduce the potential for flood waters from the South Fork Forked Deer River from inundating the site. The soil borrow pits used for the levee construction subsequently became sludge storage lagoons. Figure 1-2 shows the general site facilities and historical lagoon locations.

During 1974 and 1975, a wastewater treatment system was installed which operated through 1981. This system incorporated two oil/water separators, six sand filters and a recirculation pond. The engineering report for the treatment system reportedly states that 25,000 gallons of groundwater per day entered the sump under the pressure treatment cylinders. This report also indicated that there was an expected accumulation of 5 tons of sludge per year in the sand filters at the accumulation rate of 10.5 cubic feet per week. This would have required a clean out every 3 months. It has been reported that a "few" loads of sand filter sludge were spread on the back road at the east end of the property. In addition, the recirculation pond was reported to have overflowed on more than one occasion during its operation.

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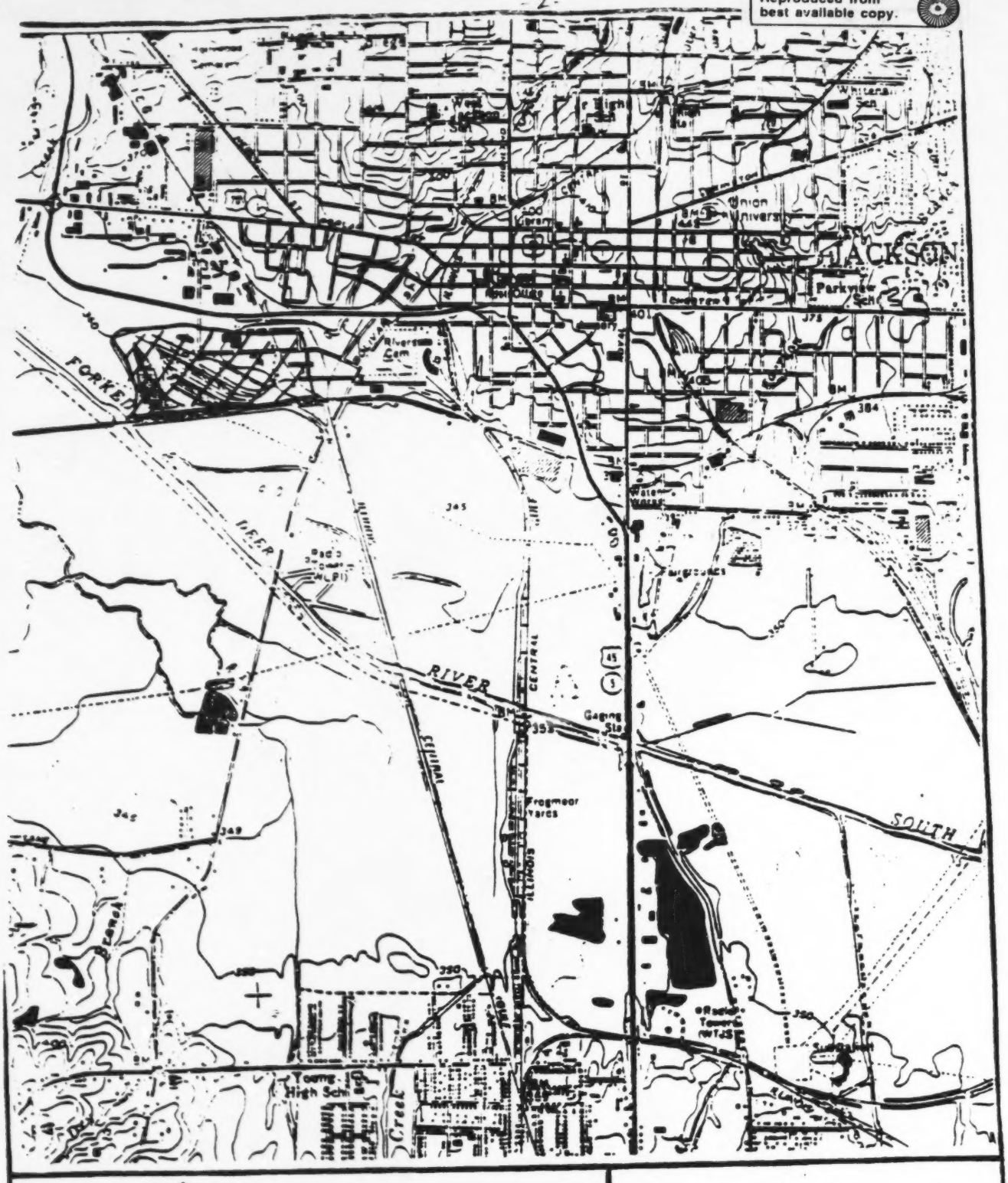
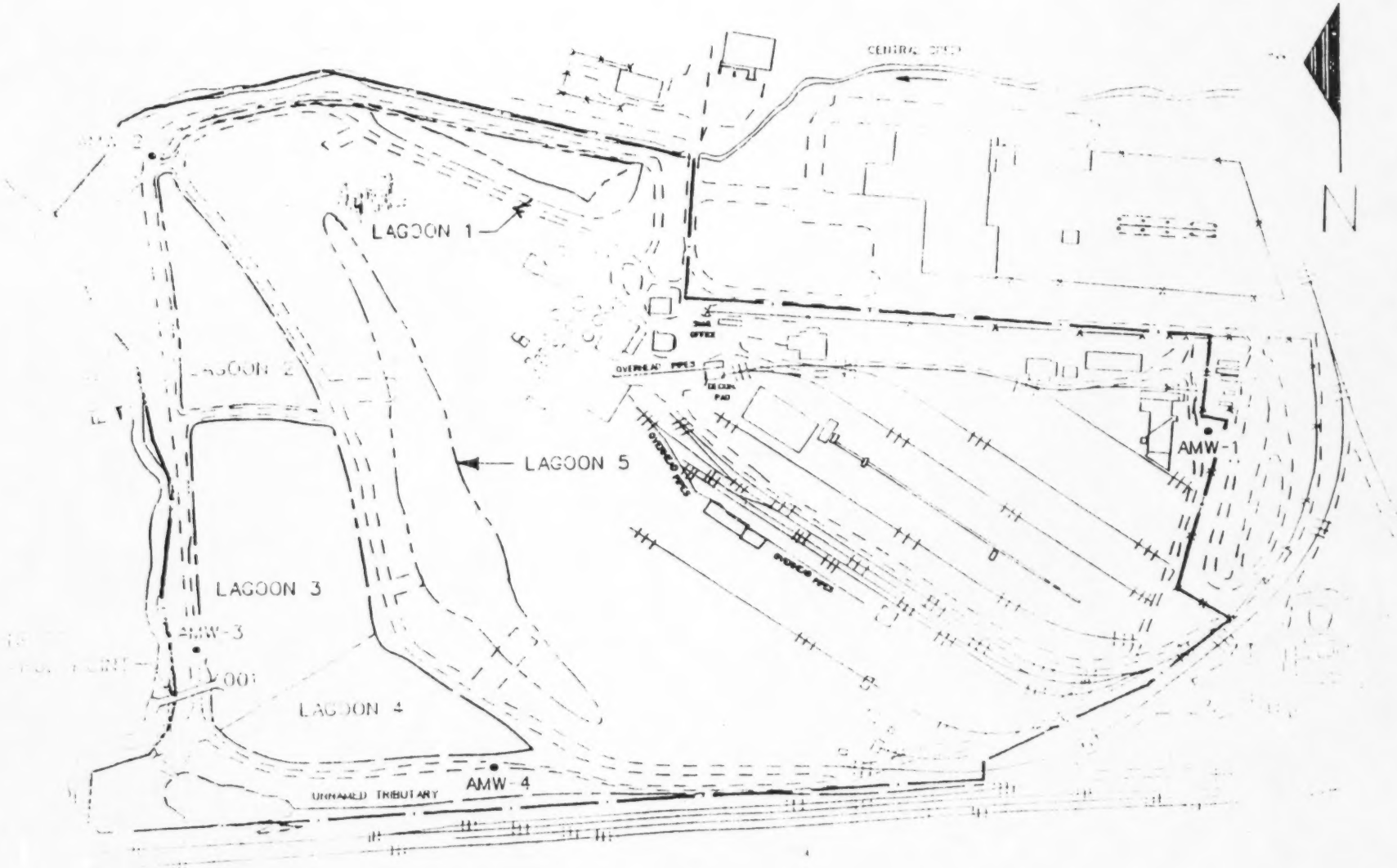


FIGURE 1-1
SITE LOCATION MAP



MONITOR WELLS BY TENNESSEE [illegible]
OF SOLID WASTE MANAGEMENT

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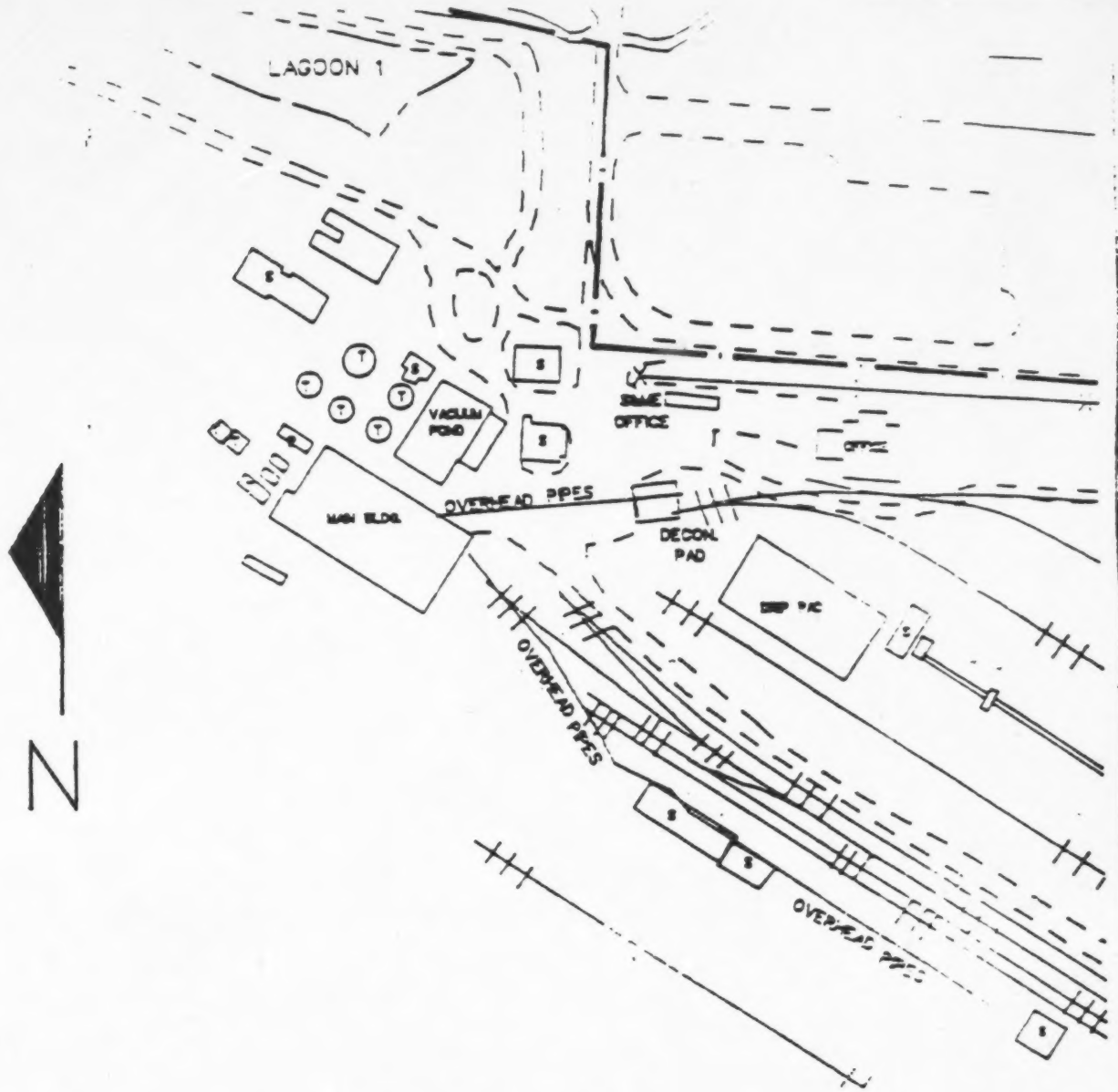

SCALE (FEET)
0 100 200

LEGEND
T TANK
S SHED
P PIT

S&ME

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DETAIL OF [illegible]
PLANT PROCESS FACILITY
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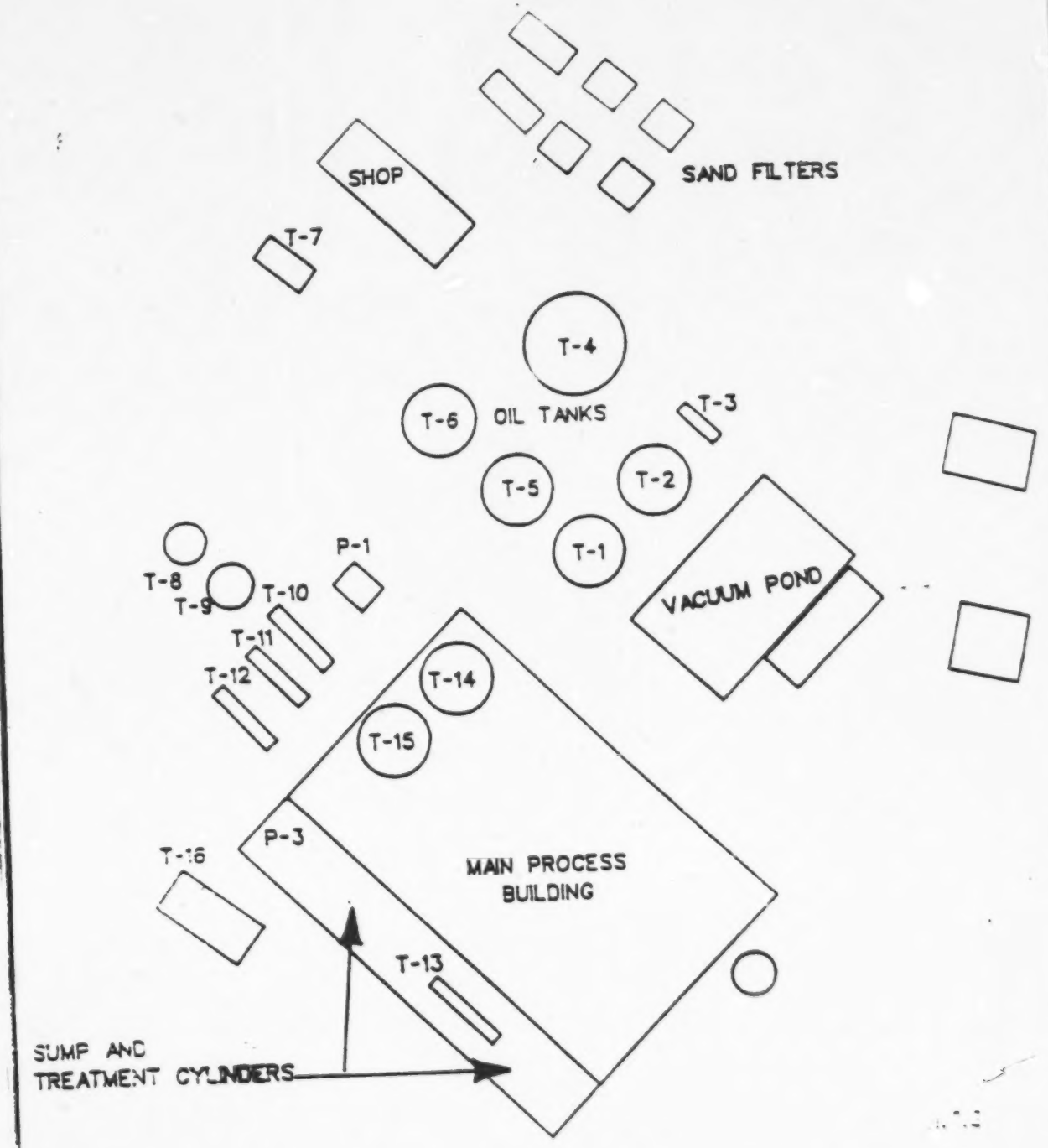

S&ME

FIGURE 1-3
TANK LOCATION MAP
AMERICAN CREOSOTE WORKS
JACKSON, TN
S&ME JOB NO. 1175-86-015A

The American Creosote Works, Inc., ceased operations in December 1981. (In May 1982, ACW filed for bankruptcy under Chapter 11 of the Bankruptcy Law, see Enforcement Section.)

Response actions at the ACW site began immediately prior to the closing of the facility and continue to the present. Listed below in chronological order are the actions identified.

-- November 1981: Tennessee Department of Health and Environment (TDHE) installed four shallow groundwater monitor wells around the property line.

-- December 1981: National Pollution Discharge Elimination Systems (NPDES) Permit #TN0001904 issued. ACW facility ceased operation.

-- June 1982: TDHE sampled the site. High concentrations of PCP and creosote were present.

-- March 1983: Lagoons at the site overflowed.

-- May 1983: Sampling at the ACW site by the EPA Environmental Services Division (ESD) personnel indicated the sludge, surface soils, lagoon waters and shallow groundwater south and southwest of the lagoons were contaminated with organic compounds associated with wood preserving using creosote and PCP. The EPA was authorized to remove hazardous wastes at the site. From June 4 to June 22, 1983, approximately 30,000,000 gallons of water were pumped from the site to the South Fork Forked Deer River. Daily samples taken by EPA did not exceed the PCP concentration of 100 parts per billion (ppb) discharge criteria set by the Tennessee Division of Water Quality. Treatable portions of the lagoon waters were treated by filtration and carbon absorption prior to discharge. The intratubal portion of material in the lagoons was stabilized with lime kiln dust in lagoons 1 and 3, and covered with a clay cap.

-- June 1984: EPA inspected the site.

-- February 1985: Repair work was authorized at the site to mitigate effects of leaking tanks.

-- November 1985: Analytical data from several old artesian wells indicated results for the acid-extractable organics below detection limits of 0.01 mg/l (10 ppb).

-- May 1986: Plans for the Remedial Investigation began between the Corps of Engineers and EPA.

-- January 1987: Corps and EPA began field work for the RI/FS.

II. B. Enforcement History

In December 1981, American Creosote Works Tennessee, Inc., in Jackson, Tennessee received its National Pollution Discharge Elimination Systems (NPDES) Permit #TN0001904; however, shortly thereafter, the facility ceased operation. On May 21, 1982, ACW filed for Chapter 11 Bankruptcy.

In June 1983, EPA approved $860,000.00 in CERCLA emergency funds to dewater the site, remove and bury sludge, and cap certain areas with clay. On June 1, 1983, the Technical Assistance Team (TAT) took samples at the site. On June 3, 1983, the Gulf Strike Team pumped water from the site to the Forked Deer River. EPA consolidated the sludge into a control area and capped the area with clay. All on-site operations were completed by August 13, 1983. Costs for the above described activities totalled $735,399.61. In October 1984, the site was placed in Group IX of the National Priorities List. On September 19, 1985, EPA approved an Action Memorandum for a Remedial Investigation and Feasibility Study (RI/FS) of the site in the amount of $306,000.00 and thru 1986 that cost increased to $800,000.00.

On July 25, 1983, EPA filed a proof of claim for $3,500,000.00 in the Chapter 11 Bankruptcy proceeding. Due to ACW's lack of adherence to the court's procedures, on April 20, 1988, the U.S. Bankruptcy Court for the Northern District of Florida, Pensacola Division, dismissed ACW's case. Based upon this fact and the fact that the Tennessee Secretary of State revoked ACW's charter of incorporation on April 9, 1985, ACW is no longer in business and is not a viable party for cost recovery purposes.

III. Community Relations History

Community relations activities at the American Creosote Works site have been handled with direct involvement from the U.S. EPA and TDHE. The initial contact with the public took place in Jackson, Tennessee in 1982. It was in the form of interviews with representatives of the City of Jackson with respect to the upcoming Superfund removal action of June 1983. Two public meetings were held for the Jackson community. The first meeting was held in December 1986 prior to initiating RI/FS field activities. The second meeting was held on August 29, 1988 to disclose the results of the RI/FS to the Jackson community. The remedial alternatives from the FS were discussed as well as EPA's proposed plan to address site contamination.

Public involvement and participation regarding the site have been limited. Representatives of the City of Jackson have asked for greater involvement in response planning and implementation. There is concern regarding the potential impact on the Jackson well field located 1-2 miles northeast of the site, and the sewer interceptor line located near the southern edge of the site. Also there is a strong interest from these local bodies to facilitate development of the site and the surrounding area (see Responsiveness Summary for further discussion).

IV. Scope and Role of Operable Unit within Site Strategy

The remedial investigation identified general areas of contamination but was not of sufficient scope to thoroughly define the extent of the contamination in soil, groundwater or surface water. The FS identified these three as the principal threats posed by the site but data gaps are significant enough that a final remedy cannot be selected without additional study. As a result, this operable unit will reduce the potential for direct exposure to surface contamination resulting from degradation of the tanks and site structures and minimize potential for increased spread of contamination due to flooding while additional information is developed and analyzed. This action will dispose of process liquids and sludges (estimated 500,000 gallons contaminated water, 25,000 gallons oil and 115,000 gallons sludge) currently in on-site containers, demolish and dispose of the process buildings and storage tanks, isolate the site with fencing and construct flood control. Implementation of this phased approach will minimize the highest risk of human or environmental exposure through use of proven technologies in a manner consistent with a permanent remedy.

V. Summary of Site Characteristics and Risks

The wood preserving operation at the site used both creosote and pentachlorophenol Wastewater sludges from the creosote and PCP treatment of wood products are listed as K001 wastes under RCRA. The plant process facilities are considered a point source of contaminants. These structures include the treatment building, pressure cylinders, boiler room tanks, oil storage tanks, tank cars, piping, vacuum pond, sand filters (and other water treatment facilities) and associated pipes, appurtenances and storage buildings. Leakage from these structures and adjacent pits are causing a constant discharge of contaminants. Several of the tanks and pipes are structurally unsound, posing the threat of sudden, major release of contaminants. In addition, many of the tanks are open-topped, allowing entry of precipitation which increases the volume of contaminated liquids and adds to the threat of release. Surface water collecting behind the facility dikes from upgradient poses a flooding hazard which may spread contamination both on- and off-site.

The RI identified several classes of compounds of concern at the ACW site. These were volatile organic compounds, polynuclear aromatic hydrocarbons, and phenolic compounds. The maximum concentrations of PAH's and phenolics at the site are:

Location	PAH's	Phenolics
Tanks	340,000 ppm	19,000 ppm
Pits	105,000 ppm	5,800 ppm
Soils	11,530 ppm	1,700 ppm

In the baseline risk assessment, indicator chemicals were chosen according to the Superfund Public Health Evaluation Manual. This process aids in the identification of chemicals which are believed to represent the most toxic and carcinogenic members of each class of chemicals. The indicator chemicals and the class of compounds each represents are:

-- benzo[a]pyrene and benz[a]anthracene - polynuclear aromatic hydrocarbons
-- tetrachlorophenol - phenolic compounds

Benzo[a]pyrene and benz[a]anthracene were detected in high concentrations in soils and in tank wastes. In tanks containing creosote, concentrations of these contaminants exceeded 1000 ppm. Tetrachlorophenol was detected in a single near surface soil sample and in two of the three ground water samples. Benz[a]anthracene is a suspected human carcinogen. Tetrachlorophenol is not known to be carcinogenic to humans or animals.

The baseline risk assessment identified direct contact with contaminated oils and inhalation of contaminated dust as primary routes of exposure. Long-term or sudden release of soil contamination and poses the risk of surface water and groundwater contamination.

VI. Documentation of Significant Changes

CERCLA Section 117(b) requires that this remedial action plan be:

> [a]ccompanied by a discussion of any significant changes (and the reasons for such changes) in the proposed plan and a response to each of the significant comments, criticisms and new data submitted [on the RI/FS report and the Proposed Plan.]"

EPA did not receive any new or additional information from the public hearing or public comment period. There were no significant comments, criticisms received after the August 29, 1988 Public Hearing and before compilation of this ROD. However, the selected alternative described below contains significant changes from the Proposed Plan and these changes affect the scope, performance, and cost of the selected remedy. These significant changes are a logical outgrowth of the information and analysis presented to the public and could have been reasonably anticipated by the public.

The selected alternative will be described in greater depth below. This section will briefly describe the differences between the proposed plan presented to the public on August 29, 1988 and the selected alternative herein.

From the FS alternatives evaluation, EPA selected the following components as the proposed plan or preferred remediation at the public hearing:

-- groundwater monitoring
-- deed restrictions limiting further use of the site
-- construction of flood protection dike around the site
-- installation of a containment barrier around the non-aqueous phase liquids (NAPL) plume of creosote and pentachlorophenol
-- groundwater extraction and treatment of the subsurface contamination to include soluble organics
-- solidification of surface soils in place, or through excavation solidification and replacement of soils on-site which includes remediation of tank sludges
-- stream sediment remediation
-- installation of security fencing around the site

The selected remedial action operable unit is a subset of the proposed plan and includes:

* deed restrictions limiting further use of the site
* construction of flood protection dike around the site and site stabilization
* removal and disposal of tanked liquids and sludges
* removal and disposal of site structures
* installation of security fencing around the site

As submitted these changes are significant as determined under CERCLA Section 117(b). The changes could be reasonably anticipated by the public because it was emphasized in the RI/FS and at the public hearing that there were data gaps concerning groundwater, soils and stream sediments and also that both the groundwater extraction treatment technology and the practicability of installing a containment barrier were uncertain. The EPA also stated at the public hearing that this uncertainty could be dealt with during the remedial design phase. After the public hearing and further consideration, the EPA management and project team decided that the most advisable and appropriate course of action would be to implement the operable unit clean-up measures only and address the groundwater, soil and stream sediment questions in a subsequent ROD. A citizen would be able to anticipate this change in scope because of the additional data gathering and technical difficulties associated with groundwater extraction underscored at the August 29, 1988 public hearing. This operable unit is a logical subset of the proposed plan.

VII. The Selected Remedy

This operable unit will initiate action at the site while additional information is developed and evaluated. The selected remedy includes:

* deed restrictions limiting further use of the site
* construction of flood protection dike around the site and site stabilization
* removal and disposal of tanked liquids and sludges
* removal and disposal of site structures
* installation of security fencing around the site

This operable unit includes: treatment of the water contained in the tanks; incineration of the oils and sludges from the tanks; decontamination, demolition and disposal of the tanks; and, consolidation and incineration of sludges (spilled or leaked) in the immediate vicinity of the buildings and tanks. Water from the tanks will be treated on-site utilizing a sand filter, filter press and carbon adsorption unit. Treated water will be analyzed to document treatment efficiency and discharged to the South Fork Forked Deer River or Central Creek. The oil and sludges from the site will be incinerated off-site at a fixed facility or on-site in a mobile incinerator if an off-site facility is unable to dispose of the waste. The site structures (buildings, tanks, pipes) will be decontaminated and disposed off-site at a Subtitle D facility to be selected in consultation with the Tennessee Department of Health and Environment. Uncontaminated or decontaminated salvageable materials will be sold if possible to a scrap dealer or recycler.

Phase II of this remediation is intended to remediate more areas of the site by constructing a fence around the site boundary to deter access to casual visitors and construct flood-protection diking. This option may be implemented concurrent with or subsequent to Phase I. Removal of non-process area structures and other incidental construction is not planned during either phase, but will be addressed as part of the final remedy. Site stabilization pending a final remedy will include monitoring water levels on-site behind the dikes and pumping, treatment (as needed) and discharge of impounded water.

Remediation of the surface soils is not planned during either phase since bench- or pilot-scale testing is needed to verify that the technologies discussed in the FS report are applicable to site conditions.

VIII. Statutory Determinations

The U.S. EPA and TDHE believe that this remedy will satisfy the statutory requirements of providing protection of human health and the environment, attaining applicable or relevant and appropriate requirements of other environmental statutes, will be cost-effective, and will utilize permanent solutions and alternative treatment technologies or resource recovery technologies to the maximum extent practicable.

IX. Protection of Human Health

The selected remedy provides adequate protection of human health and the environment by eliminating the direct exposure threat through dermal contact with surface soils and tank sludges.

There are no unacceptable short-term risks or cross-media impacts anticipated by implementation of the Operable Unit.

Implementation of this alternative would remove tanked sludges and process liquids, and the process buildings which are a potential major contamination source. Fencing the site would isolate the casual visitor from the near surface contamination and limit the threat of dermal contact and ingestion. Implementation of this alternative would also remediate future environmental effects that may occur as a result of a major release from the tanks, but would not address environmental harm that may be occurring as a result of existing contamination in the surface streams. Additionally, since this alternative does not address groundwater contamination by the aqueous or NAPL plume, it has no impact on continued off-site contaminant migration via the groundwater route.

X. Attainment of ARARs

This Operable Unit will comply with the applicable or relevant and appropriate requirements listed in Table 1.

XI. Cost Effectiveness

This alternative affords a higher degree of overall effectiveness in not only protecting the public against direct exposure to surface soils but also in removing the threat of sudden release of contaminated liquids. The present worth of this alternative ranges from $5 million to $6 million dollars (Attachment 1. Action Memorandum). This remedy is a proven technology, and it is a straightforward cleanup remedy which can be implemented year round.

This alternative uses technologies that are proven for isolation (fencing), remediation of tanked liquids and sludges (incineration), remediation of process buildings (decontamination and off-site disposal) and flood protection (earthen dike construction or reinforcement). Stabilization of the site conditions through use of the proven technologies would allow time to do the testing needed to validate the less proven technologies that may be appropriate for the final remedy.

XII. Utilization of Permanent Solutions and Alternative Treatment Technologies or Resources Recovery Technologies to the Maximum Extent Practicable and Preference for Treatment as a Principal Element

U.S. EPA believes this remedy is the most appropriate solution for initiating an appropriate operable unit at the ACW site and for providing the best balance among the evaluation criteria for the alternatives evaluated. This remedy provides effective protection in both the short- and long-term to potential human and environmental receptors, is readily implemented, is cost effective and is consistent with future response actions that may be undertaken at the site. Thermal destruction of liquids and sludges represents a permanent reduction (through treatment) of toxicity, mobility and volume.

Table 1.

Applicable or Relevant and Appropriate Requirements

Action	Citation
Discharge of treatment system effluent	40 CFR 122.44(a) 40 CFR 122.44 Water Quality Act, Tennessee Code Annotated (T.C.A.) Section 69-3-101 et seq. Rule Chapter 1200-4-3 40 CFR 131
Protection of flood plains	40 CFR 6, Appendix A
Fish and Wildlife Coordination Act (16 USC 661 et seq.)	40 CFR 6.302
Dike stabilization	40 CFR 264.221
Solid waste disposal	Solid Waste Disposal Control Act, T.C.A. Section 68-31-101 et seq. Rule Chapter 1200-1-7
Off-site transport of hazardous wastes On-site incineration of hazardous wastes	Hazardous Waste Management Act. Part 1 T.C.A. Section 68-46-101 et seq. Rule Chapter 1200-1-11, 12 and 13. Part II T.C.A. Section 68-46-201 et seq. Rule Chapter 1200-1-11-14 40 CFR 264
On-site incineration of hazardous wastes (in addition to the above)	Air Pollution Control Act. T.C.A. Section 68-25-101 et seq. Rule Rule Chapter 1200-3-1

Final Responsiveness Summary

The U.S. Environmental Protection Agency (EPA) established a public comment period from August 30, 1988 through September 20, 1988 for interested parties to comment on EPA's Proposed Remedial Action Plan (PRAP) for the first operable unit of the ACW site.

EPA held a public hearing on August 20, 1988 in Jackson to describe the remedial alternatives developed and present EPA's preferred remedial alternative for the ACW site.

A responsiveness summary is required by Superfund policy for the purpose of providing EPA and the public with a summary of citizen comments and concerns about the site, as raised during the public comment period, and EPA's responses to those concerns. All of the comments summarized in this document have been factored into EPA's final decision of the preferred alternative for cleanup of the ACW site.

This responsiveness summary for the American Creosote Works site is divided into the following sections:

I. Background on Community Involvement and Concerns. This section provides a brief history of community interest and concerns regarding the American Creosote Works site.

II. Summary of Major Questions and Comments Received During the Public Comment Period and EPA Responses. This section presents both oral and written comments submitted to EPA during the public comment period, and provides EPA's responses to these comments.

III. Remaining Concerns. This section discusses community concerns that EPA should be aware of as it prepares to design and implement the first operable unit, and plan the necessary steps to address the second operable unit for the ACW site.

IV. Correspondence. This section serves as an attachment for correspondence received and responded to during the public comment period.

I. Background on Community Involvement and Concern

The Jackson community has been aware of the contamination problem at the ACW site for several years. In response to complaints received between 1980 and 1983, TDHE began investigating the site for surface water and groundwater contamination. Then in June 1983, the U.S. EPA Region IV conducted the first of two removal actions at the site to stabilize the contamination and protect the nearby residents from any contamination spreading off-site into potable drinking water supplies. The second response action took place in the latter part of 1985 when the on-site tanks which contained sludges were repaired to prevent any leaking. Both of those responses included EPA interviews with both Jackson officials and

community residents. Before with the public hearing on August 29, 1988, EPA conducted a public meeting in December 1986 at the beginning of the Remedial Investigation of ACW. At both of these meetings, the key issues and concerns identified were:

Financial Concerns Both officials and merchants were concerned with the negative impact a Superfund site would have on land value and business development in the area.

Coordination with Local Officials Officials expressed a desire to be kept informed about activities and developments at the ACW site. Health officials were concerned about the possible effect of the groundwater contamination on the nearby Jackson well field and the wastewater treatment lines that run tangential to the southwest boundary of the site. Officials did express dissatisfaction with the EPA's effort of keeping the Jackson community well informed over the last three to four years.

II. Summary of Major Questions and Comments Received During the Public Hearing and Comment Period and EPA Responses

At the public hearing, the community residents expressed concern about the extensive surface soil and groundwater problem, the wastewater lines running near the site, time frame to clean the site completely and ways to restrict access to the site to prevent people from trespassing on the site and being exposed to hazardous waste.

Also EPA received two letters from Kenneth Martin who is manager of the Water Department of the Jackson Utility Division. His August 23rd and August 29th letters are addressed specifically as part of this Responsiveness Summary. This section will briefly summarize the EPA responses to both (See Section IV below) letters and the concerns at the public hearing comments:

Concerns, comments and views of the Jackson community were similar in nature to those of Kenneth Martin's correspondence; in fact, Mr. Martin's concerns elaborated on the statements and views expressed at the hearing. There was the comment that the RI/FS study performed for ACW did not adequately address the extensive groundwater contamination at the site, its effects on the Jackson well field and the need to collect more data about the subsurface contamination. The EPA completely agrees with Mr. Martin regarding the inadequacy of the groundwater data accumulated thus far and therefore the EPA plans to perform additional investigation of the groundwater condition below the site, off-site, re-evaluate the direction of the groundwater gradient and establish definitive results regarding the relationship between the ACW contaminated aquifer and that of Jackson's well field.

When this additional investigation is completed, the EPA will issue another proposed plan to remediate the groundwater and will conduct a public hearing regarding this plan. The damage done to the aquifer below the ACW

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site is severe and will require a long time to clean up. The EPA will use the most practicable technology to clean up the aquifer and at the same time protect the Jackson well field aquifer from being contaminated. Another major concern was the forty eight inch (48") sewer interceptor line running near the site. This line is off-site and does not run under the property of the ACW site as Mr. Martin contends in his correspondence. These lines were placed near the southwest boundary of the site at approximately the same time the ACW company ceased operation. The EPA will coordinate with Mr. Martin's staff when performing field work in that particular area. The EPA does not have authority to finance repair work for the sewer line since EPA's jurisdiction only extends to the contamination directly caused by the ACW contamination. Finally EPA recognizes the dangers and risks associated with exposure to surface soil contamination and is presently making plans to relieve this threat to any people passing or venturing on the site.

III. Remaining Concerns

EPA's field work during the remedial design phase and remedial action pursuant to this ROD will be concerned with cleaning up the surface soil contaminants and the tank process area. Additional field work and further investigation will be in conformance with this action and compatible with the final ROD in FY 89 that will address the groundwater contamination.

IV. Correspondence

Note attachments and EPA responses.

Jackson Utility Division

POST OFFICE BOX 68 JACKSON, TENNESSEE 38302-0068 TELEPHONE 901 422-7500

KENNETH W. MARTIN
MANAGER
WATER DEPARTMENT

August 23, 1988

Mr. Greer C. Tidwell
Regional Administrator
U.S. Environmental Protection Agency
Region IV
345 Courtland Street
Atlanta, Georgia 30365

Re: American Creosote Works Superfund Site
Jackson, Tennessee

Dear Mr. Tidwell:

Jackson Utility Division (JUD) recommends that additional groundwater and contaminant studies should be performed for the above-referenced site in order to determine the extent of contamination and to determine if this contamination could have an effect on Jackson's drinking water supply.

JUD has recently reviewed the draft remedial investigation report and the draft feasibility study for the American Creosote Works Superfund site. JUD's conclusions are:

1. The purpose of a remedial investigation is to determine the extent of contamination, the rate the contamination is moving, and which contaminants are present. This information is needed so that the best alternatives for cleanup may be determined in the feasibility study.

2. The remedial investigation report states that the extent of both horizontal and vertical contamination has not been defined.

3. The direction of groundwater flow at the site is presently assumed to be from the northeast to the southwest toward the Forked Deer River.

4. The city of Jackson's water supply is from groundwater. The city's wells are north and southeast of the site.

5. Taking into consideration the minute gradient (0.0031 feet per foot) and the fact that groundwater investigations have been performed during a drought, it is conceivable that the direction of groundwater flow could reverse after periods of long, intense rainfall.

6. A groundwater flow reversal could mean a possible effect on the city's water supply from site contamination.

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7. The wastewater system lines run through the site. This was not addressed in the remedial investigation or the feasibility study. These would certainly be affected during remedial activities. Infiltration of contamination into the wastewater system will likely occur. The U.S. Environmental Protection Agency (EPA) has not obtained any information from JUD concerning our treatment capabilities.

8. An adequate remediation plan cannot be developed until the problem is better defined (i.e., How can anyone clean up the problem if no one knows what the actual problem is?).

9. JUD has discussed with the United States Geological Survey (U.S.G.S.) the possibility of performing a groundwater study in the Jackson area because JUD feels the remedial investigation has not defined groundwater conditions adequately.

10. The remedial investigation appears to be inadequate, due to the factors discussed above.

Therefore, JUD believes EPA should perform further groundwater and contaminant investigations which would fill in the gaps of the remedial investigation before a remedial action is chosen (i.e., the investigation should better define groundwater conditions in the area and define the extent of contamination). JUD believes this study should also determine any possible effects of contamination of the city of Jackson's water supply. Perhaps EPA would consider a U.S.G.S. study as part of the remedial investigation.

JUD believes that a remedial option should be decided as soon as possible so that remedial activity can begin, but if the problem has not been properly defined then a proper alternative cannot be chosen.

JUD would appreciate a response to this letter as soon as possible. Thank you for your time and consideration.

Sincerely,

JACKSON UTILITY DIVISION

Kenneth W. Martin
Manager, Water Department

KWM/pdc

cc Joe Exum, JUD
Robert Conger, Mayor, City of Jackson
Dennis Manganiello, EPA Project Manager
Danny Lester, JUD
Richard Holland, Jackson Basin Office, TDHE
Lauren Heffelman, UT MTAS

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Jackson Utility Division

POST OFFICE BOX 68 JACKSON TENNESSEE 38302-0068 TELEPHONE 901 422-7500

August 23, 1988

KENNETH W. MARTIN
MANAGER
WATER DEPARTMENT

Mr. Dennis Manganiello
Remedial Project Manager
Superfund Branch
U.S. E.P.A., Region IV
345 Courtland Street, N.E.
Atlanta, Georgia 30365

RE: U. S. Environmental Protection Agency, Region IV
Superfund Public Information Meeting for the American Creosote Site

Dear Mr. Manganiello:

Jackson Utility Division has concerns about the hazardous waste at the American Creosote site and the impact it could have on the water and wastewater systems which serve more than 60,000 people within the City of Jackson and Madison County, Tennessee. Some of these concerns are listed as follows:

1. The protection of all groundwater within the City of Jackson and Madison County from contamination of hazardous waste from the American Creosote site.

2. Full development of the Jackson Utility Division's well fields to meet the future water demands could completely reverse the hydraulic gradient in the aquifer creating a condition for withdrawal and/or inflow from the vicinity of the American Creosote site.

3. Jackson Utility Division has a forty-eight (48) inch interceptor and a ten (10) inch outfall wastewater line crossing the American Creosote site, and infiltration and/or inflow of the hazardous waste into these lines will likely occur.

4. The time frame it will take to clean up the aquifer from the potential contamination from the American Creosote site.

The Jackson Utility Division would like these concerns and the attached letter to Mr. Greer C. Tidwell, Regional Administrator, Region IV, USEPA, dated August 23, 1988, to be entered into the record of this Public Hearing.

Very truly yours,

JACKSON UTILITY DIVISION

Kenneth W. Martin, Manager
Water Department

KWM:jw
Attachment

Mr. Kenneth W. Martin
Jackson Utility Division
P.O. Box 68
Jackson, TN 38302-0068

Dear Mr. Martin:

The purpose of this letter is to respond to your Correspondence dated August 23, 1988 and August 29, 1988. Your letters and this response are part of the ROD for the American Creosote Works Site, Jackson, TN.

The following statements are responses to your August 23rd letter to Mr. Tidwell:

Response to #1. The purpose of the remedial investigation is to determine not only the extent but the nature of the contamination. The remainder of your comment is accurate.

Response to #2. To be more specific, the RI and the FS state that the horizontal and vertical contamination of the aqueous or dissolved contaminant plume is not fully defined by the RI data.

Response to #3. This flow is not assumed but calculated from well testing and the flow is characterized as a radial vector and its direction varies or radiates from the dominant flow northeast to southwest.

Response to #4. This statement is correct and your comment is noted.

Response to #5. Groundwater flow would not be reversed following a long intense rainfall. If anything the rainfall would intensify the hydraulic gradient and the flow would continue to the southwest toward the Forked Deer River.

Response to #6. Not necessarily since the contaminants are highly insoluble and adhere to unconsolidated alluvial deposits rather than dissolve to any appreciable extent. However this comment is premised on #5 which is erroneous.

Response to #7. Your first statement is inaccurate. The wastewater lines 48 inch interceptor and 10 inch outfall do not cross the site where the heaviest

concentrations are found. The 10 inch outfall crosses the northwest corner where low levels of contaminants are found. The 48 inch interceptor crosses the southwest corner and is assumed to be above the area of highest contamination. However inflow and infiltration cannot be ruled out. The US EPA's jurisdiction is the ACW site and any off-site areas directly affected by the ACW contamination. There is no direct evidence that contaminants from the ACW site have found their way into the 48 inch line and therefore are of no consequence to JUD's treatment capabilities.

Response to #8. An adequate plan can be developed for the surface soils. However the groundwater problem will need additional investigation.

Response to #9. Comment noted.

Response to #10. The remedial investigation is inadequate in addressing the groundwater, surface water & sediment problem.

August 29th letter to Dennis Manganiello:

Response to #1: The EPA and State of Tennessee have the same concerns and are of the highest priority.

Response to #2: See Response to #5 above. Based on the information developed as part of the RI and JUD water usage, reversal in the hydraulic gradient is not likely.

Response to #3: This statement is inaccurate, note response to #7 above.

Response to #4: The alternatives for groundwater remediation presented in the FS require a significant timeframe for cleanup of the aquifer. There are no known cost effective alternatives for "quick" groundwater remediation at the present time.

This initial operable ROD will address surface soils, tank sludges, flood and access control. During the remedial design phase the EPA will investigate further the groundwater problem. If you wish to coordinate with us in this effort in regards to any effects the sewer lines or well fields please do not hesitate to contact Richard Green or myself at the above address. Please be advised the

U.S. Government does not have any authority to spend money on any municipal wastewater treatment facility or components in the vicinity of a hazardous waste site, that is the City of Jackson's jurisdiction and responsibility.

Sincerely,

Dennis Manganiello
Remedial Project Manager
KY/TN Site Management Unit
Superfund Branch, NSMS

DRAFT

ACTION MEMORANDUM

DATE:

SUBJECT: Request for $2 Million at the American Creosote Works Site, Jackson, Tennessee

FROM: Greer C. Tidwell
Regional Administrator

TO: J. Winston Porter
Assistant Administrator

ATTN: Timothy Fields Jr., Director
Emergency Response Division

I. ISSUE:

Immediate response actions are estimated to exceed the $2 million at the American Creosote Works Site in Jackson, Tennessee. Further response actions can not be initiated unless an exemption pursuant to Section 104(c)(1) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), as amended by the Superfund Amendments and Reauthorization Act of 1986 (SARA), is approved. This action meets the removal criteria of Section 300.65 of the National Contingency Plan (NCP) and is consistent with both CERCLA as amended by SARA, and the National Contingency Plan. This request will allow for a total project ceiling of $6.4 million. The previous project ceiling for work completed in 1983, 1985, and 1988 was $942,000. This action will be consistent with the Record of Decision (ROD) and completely funded by the remedial program for the $5 million needed for this project. The purpose of this action memorandum is to request your approval of this proposed removal action.

II. BACKGROUND

The American Creosote Works began operation as a wood preserving facility in the early 1930's and continued until December, 1981. The plant process area and tanks included the physical structures on the site: the treatment building, pressure cylinders, boiler room tanks, oil storage tanks, tank cars, piping, vacuum pond and sand filters.

In May, 1983, EPA conducted an immediate removal at the facility. At that time, five unlined surface impoundments were overflowing at the site. Each contained creosote and pentachlorophenol (PCP) sludge and water. EPA contractors pumped 30,000,000 gallons of water from flooded areas of the site and treated and discharged it to the South Fork Forked Deer River. When the water level approached the top of the sludge deposits, the water became highly emulsified. This untreatable portion of oil/water mixture was placed in the empty tanks on the site. Dewatering the site revealed contaminated material

far in excess of the original estimate, making the allocated funds inadequate for complete site cleanup. Plans were approved for the on site containment of the contaminated sludges and soils by stabilizing with lime kiln dust, partially covering lagoon 1, and totally covering lagoons 3 and 4 with a clay cap. Approximately $736,000 was expended in this removal action.

A. Incident/Response History

1. Location:

The American Creosote Works (ACW) site is located in central Madison County, Tennessee, on the Jackson South 7-1/2 minute quadrangle. The site is west of by-pass 45 south. The site covers approximately 60 acres in a predominantly industrial/urban or undeveloped area immediately southwest of downtown Jackson, Tennessee. The site is bounded on the south by the Seaboard Railroad and the southwest by South Fork Forked Deer River. The west and north are bounded by Central Creek, a tributary to South Fork Forked Deer River, and the east by an adjacent industry.

2. History:

During the time that the American Creosote Works site was ranked on the NPL and the Remedial Investigation and Feasibility Study (RIFS) was completed, vandalism and deterioration of the tanks continued.

In May, 1985, the Tennessee Department of Health and the Environment contracted for a site assessment. The assessment included sampling, inventory, and analysis of the wastes stored in the tanks and pits on site. The inventory of the fifteen (15) remaining tanks, nine (9) sand pits, and one (1) sump identified the quantities and concentrations of liquids and solids remaining. The tanks and pits contained over 115,000 gallons of creosote and PCP sludge, 25,000 gallons of contaminated oil, and 500,000 gallons of contaminated water. Most of the tanks and pits were exposed to atmospheric precipitation, posing a potential risk of overflow and spillage. Three pits and at least one tank were full and even a slight precipitation caused overflow of the top oil layer. At least two tanks were found with leaking bottom nozzles.

In March, 1986, several leaks had developed in the storage tanks. A removal action was initiated at ACW at this time consisting of treating the contaminated water in the storage tanks and the old treatment system, consolidating all the oil in the storage tanks into one secure tank, and constructing covers for the treatment system and open storage tanks. The sludges remaining in the storage tanks were not addressed in this action as their was a lack of available funds. Approximately $81,000 was expended for this removal action.

B. Site Conditions

EPA was notified of the deteriorating tank conditions and leaking contaminants at the site again in September, 1988. Discharges were observed during a site visit by the EPA OSC on September 27, 1988 from the leaking tanks. To prevent further vandalism and restrict site access, EPA in October, 1988, installed a security fence around the tank farm area and a large portion of the site. Approximately $30,000 was expended for this removal action. The State of Tennessee temporarily repaired the damaged leaking tanks, but overflow conditions still exist.

1. NPL Status

This is an NPL site.

The American Creosote Works Site was added to the NPL in Group IX in 1984.

C. Quantity and Types of Substances Present

1. Hazardous Substances Present

The process of wood treatment used at the ACW site included the use of creosote and pentachlorophenol. Creosote (a coal tar derivative) is a complex mixture of hydrocarbons consisting of approximately 85 to 95 percent polynuclear aromatic hydrocarbons (PAHs) and 5 to 15 percent phenolics.

The concentration of PAHs and phenolics at the site are as high as:

Location	PAHs	Phenolics
Tanks	340,000 ppm	19,000 ppm
Pits	105,000 ppm	5,800 ppm
Soil	11,530 ppm	1,700 ppm

The estimated volumes of water, oil, and sludge contaminated with PAHs and phenolics remaining in the tanks and sand filter pits are as follows:

Water	500,000 gallons
Oil	25,000 gallons
Sludge	115,000 gallons

Wastewater sludges from the creosote and pentachlorophenol (PCP) treatment of wood products are listed as K001 waste under RCRA.

Polynuclear aromatic hydrocarbons (PAHs), phenolic compounds, metals and volatile organic compounds have been identified as the predominant contaminants on site. Recently, the EPA Carcinogen Assessment Group (CAG) has added PCP on a list of B2 class carcinogens (probable human carcinogen).

D. State and Local Authority's Roles

1. State and Local Action to Date

In November, 1981, four shallow monitoring wells were installed by the Tennessee Division of Solid Waste Management (TNDSWM) around the ACW property line.

TNDSWM conducted several site inspections during 1982-1983 and collected samples on June 21, 1982. The results of the laboratory analysis showed the presence of high concentrations of pentachlorophenol (PCP) in the process storage tanks as well as in the plant's waste treatment facilities. The plant closed in 1982 and the waters in the lagoons rose. EPA conducted an emergency removal in 1983.

In February, 1985, TNDSWM authorized and funded the repair of a leaking tank containing PCP contaminated water.

In June 1985, a state funded contractor submitted a Remedial Action Plan for the ACW site to the State of Tennessee. The report was limited to the 15 tanks, 9 pits and sump area, but did not evaluate the soil contamination areas and lagoons. The plan was never implemented.

In February, 1986, TNDSWM funded a report entitled "Evaluation of Alternatives for Spill Prevention and Control at the American Creosote Works Site". This report was primarily concerned with the site security, spill response planning and secondary containment. The report concluded that the preferred method of securing the ACW site included a combination of locking tank valves and piping, installing a security fence, implementing a spill response plan and constructing a secondary containment system. None of these recommended actions were implemented.

2. Potential for Continued State and Local Response

TNDSWM has agreed to sign a state contract for a 10% cost sharing for the proposed response action.

III. EXEMPTION FROM STATUTORY LIMITS

A. Continued Response Actions are Otherwise Appropriate and Consistent with the Remedial Action to be Taken

In order to obtain an exemption from the $2 million limit, the removal action must meet the criteria set forth in CERCLA Section 104 (c) as amended by SARA. This exemption request is based on the "Consistency Waiver," which allows removal actions to exceed the statutory limits if continued response action is otherwise appropriate and consistent

with the remedial action to to be taken.

The selected remedy in the Record of Decision (ROD) is identified as Operable Unit One. The Remedial Investigation (RI) identified general areas of contamination, but was not of sufficient scope to thoroughly define the extent of contamination in soil, groundwater or surface water. The RI identified the general site hydrogeologic conditions and areas of high contamination including process liquids and sludges, and near-surface soils. Since there is a lack of information on the high levels of contaminants, the extent of contamination, and a difficult hydrogeology, a final remedy cannot be selected at this time. Operable Unit One was developed to implement early action items that are consistent with any final remedy and to address the principal threats posed by the site. These actions include:

* deed restrictions limiting further use of the site
* construction of flood protection dike around the site
* removal and disposal of tanked liquids and sludges
* removal and disposal of site structures
* installation of security fencing around the site.

Implementation of this operable unit will remove tanked sludges, process liquids and process buildings which are major potential contamination sources. This operable unit will prevent future environmental effects that may occur as a result of potential releases from the tanks. This remedy is protective of human health and the environment, attains Federal and State requirements that are applicable or relevant and appropriate for this removal action, and is cost-effective. This action is consistent with the ROD.

IV. PROPOSED ACTIONS

This remedy includes treatment of the water contained in the tanks, incineration of the oils and sludges from the tanks, decontamination, demolition, and disposal of the tanks and consolidation and incineration of sludges spilled or leaked in the immediate vicinity of the process buildings and tanks.

The oil and sludges from the site will be incinerated off-site at a fixed facility or on-site in a mobile incinerator if an off-site facility is unable to dispose of the waste.

1. Proposed Schedule

The OSC will initiate a Delivery Order for the ERCS contractor as soon as the project is approved. If on site incineration is necessary, a site specific contract for incineration will be awarded. The total project is expected to be completed by November 1989.

V. ENFORCEMENT

See 'Enforcement Sensitive' Attachment

VI. SUMMARY OF COSTS

Extramural Costs	Current Ceiling	Proposed Ceiling
Cleanup Contractor (includes ERCS, Regional ERCS, Subcontractors, Letter Contracts, Site Specific Contracts)	$821,000	$4,821,000
(10% Contingency)		482,000
TAT Costs	96,000	170,000
Subtotal Extramural Cost	$917,000	$ 5,473,000
15% Contingency of above costs		820,950
TOTAL EXTRAMURAL COST	$917,000	$6,293,950
Intramural Costs		
Intramural Direct ($30 x 500 Labor Hours, 400-Region, 100 HQ)	$9,000	$24,000
Intramural Indirect Cost ($54 x 400 Regional Hours)	$16,000	$37,600
TOTAL INTRAMURAL COST	$25,000	$61,600
*TOTAL COST (ESTIMATED)	$942,000	$6,355,550

*This cost estimate assumes that incineration costs will be performed off site at an estimated cost of $0.50/lb. If on site incineration is necessary, the estimated cost will be $350 per ton. Region IV has had several site specific contracts for incineration and found that the average cost is between $250-$450 per ton.

Alternative Actions

See ROD for alternatives.

VII. Recommendation

Because conditions at this site meet the National Contingency Plan, Section 300.65(b)(2) and CERCLA 104(c)(1)(c) criteria for removal action, I recommend your approval of this proposed action and $2 million exemption. The estimated total project cost for this action is $5.14 million of which $5.18 million is for extramural cleanup contractor cost. Previous actions at this site total $942,000 which brings the proposed ceiling to $6.4 million.

You may indicate your approval or disapproval by signing below.

Approved_____ Date _____

Disapproved _____ Date _____

ENFORCEMENT SENSITIVE

The ACW, Inc., ceased operations in December, 1981. In May 1982, ACW filed for bankruptcy under Chapter 11 of the Bankruptcy Law.